

## WINDS.

An examination of Chart No. II will reveal the prevailing direction of the wind at the Signal Service stations. Except where influenced by local causes, the arrows, which fly with the wind, point from the high towards the low barometer. The maximum velocities of the wind, in miles per hour, are given in the remarks upon storms. The average total atmospheric movement, independent of direction, is as follows for the various districts: middle and east Atlantic coasts, 7,000 miles; interior of the Middle and Eastern States, 4,310; south Atlantic and eastern Gulf coasts, 5,280; western Gulf coast, 9,566; Ohio valley and the interior of the Southern States, 4,334; Lake region, 7,107; North-west, 5,772. The largest total movements have occurred at Erie, Pa., 10,884 miles; Galveston, Texas, 11,043, and Indianola, Texas, 11,835. Winds have been lightest at Augusta, Ga., and Lynchburg, Va., where the total movements have been 2,735 and 2,539 miles respectively. The total movement on Mount Washington could not be obtained, but the highest velocity per hour recorded during the month was 114 miles.

## VERIFICATION OF PROBABILITIES.

A comparison of the predictions, as to weather, wind, temperature and barometer, prepared and issued to the public tri-daily, with the facts as shown by the following reports, has been made by an assistant other than the one making the predictions. It has been found that ninety and twenty-five hundredths (90.25) per cent. have been verified.

## NAVIGATION.

In the right-hand lower corner of Chart No. III will be found a table giving the highest and lowest water-marks for the month, with the dates of occurrence opposite the same. The Missouri was practically closed during the month, also the Mississippi above St. Louis. The latter, between St. Louis and Cairo, closed so that Cairo was the head of navigation from the 8th. The Ohio was frozen over at Pittsburgh on the 10th. At Cincinnati navigation was suspended from the 5th to the 29th, and at Louisville from the 11th to the 30th. During the latter half of the month, navigation was much impeded in New York Bay by the ice. On the 18th, Nantucket, Mass., could not be reached by vessels on account of the ice, while on the 20th, Buzzard's Bay was frozen over, and a large fleet of vessels detained off Nantucket. At North Hammond, N. Y., the St. Lawrence was frozen over on the 6th. At Ardenia, N. Y., the Hudson river has been frozen over since the 1st. The western end of Lake Erie, and in the vicinity of Isle St. George, has been frozen over during the month. At Sugar Island, Mich., the bay has been frozen over, and ice 30 inches thick, which has not occurred in 20 years. The Potomac river remained closed for several weeks from the 10th.

## TEMPERATURE OF WATER.

Upon Chart No. II, in the right-hand lower corner, will be found a table showing the maximum and minimum temperatures of the water at various stations on the lakes, rivers and sea-coast, taken at the bottom, together with the depth of water. The greatest ranges have occurred in the Southern States. At Indianola, Texas, the water became so cold on the 9th, in the lakes and bayous, that quantities of fish were chilled and washed ashore. At a number of stations, observations were entirely suspended on account of the ice, at others, only during a portion of the month.